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10/005,032	12/04/2001	Rintaro Nakatani	S004-4477	9496

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EXAMINER	
RICHER, AARON M	

ART UNIT	PAPER NUMBER
2676	9

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

KS

Office Action Summary	Application No.	Applicant(s)	
	10/005,032	NAKATANI, RINTARO	
	Examiner	Art Unit	
	Aaron M Richer	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on December 26, 2000. It is noted, however, that applicant has not filed a certified copy of the 2000-395257 application as required by 35 U.S.C. 119(b).

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on February 2, 2001. It is noted, however, that applicant has not filed a certified copy of the 2001-026370 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Barber (U.S. Patent 5,579,462).

3. As to Claim 1, Barber anticipates a system for a sample analyzer having a computer which enables user selection of new graph elements from a plurality of displayed sample characteristics to be subjected to derived data calculation or adjustment when calculation or adjustment of derived data of a previously selected graph element is executed. Barber discloses "user interface enhancements in a

computerized spectral analysis system that allow the user to directly manipulate spectral representations on the display... The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col., 1, lines 60-67). Barber's spectral analysis system is a sample analyzer, and the disclosed user interface enables selection of a spectrum to perform subtraction, which is a calculation of "derived data", as recited by Claim 1.

Barber further anticipates a display screen for displaying a plurality of sample characteristics. Barber discloses "a method of displaying a spectrum on a computer system having a display" (col. 2, lines 1-14). A spectrum consists of "sample characteristics", as recited by Claim 1.

Barber further anticipates means for displaying a user interface to enable user selection of a calculation process when possible. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col., 1, lines 60-67). Spectral subtraction is a type of calculation of derived data, as recited by Claim 1.

Barber further anticipates means for displaying a user interface for enabling user adjustment of a display position when calculation is not possible. Barber discloses that "Using a graphical input device, such as mouse 5, a user vertically resizes the overlay window in the radar window so that the overlay window bounds and defines a second portion of the spectrum (step 86). The second portion of the spectrum is then displayed

to the user in the detailed window (step 88)" (col. 4, lines 39-59). It is clear from Barber's disclosure that the overlay window can be resized to change the position of the spectrum in the detailed window, thus adjusting the display position, as recited by Claim 1.

4. As to Claim 2, Barber anticipates means for determining whether the derived data calculation process is possible. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col., 1, lines 60-67). It is implied that if Barber does calculation on the graph, it must first be determined whether calculation is possible, as recited by Claim 2

Barber further anticipates means for displaying a user interface to enable user selection of a calculation process when possible. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col., 1, lines 60-67). Spectral subtraction is a type of calculation of derived data, as recited by Claim 2.

Barber further anticipates means for displaying a user interface for enabling user adjustment of a display position when calculation is not possible. Barber discloses that "Using a graphical input device, such as mouse 5, a user vertically resizes the overlay window in the radar window so that the overlay window bounds and defines a second portion of the spectrum (step 86). The second portion of the spectrum is then displayed to the user in the detailed window (step 88)" (col. 4, lines 39-59). It is clear from

Barber's disclosure that the overlay window can be resized to change the position of the spectrum in the detailed window, thus adjusting the display position, as recited by Claim 2.

5. As to Claim 3, Barber anticipates a cursor displayed on a display screen when the graph element comprises a data curve. Barber discloses that "the user employs a graphical input device such as a mouse to manipulate overlay window 20 using well known methods such as pointing, clicking, and dragging a pointer on the display" (col. 5, lines 39-45). Barber also discloses that "absorbance data is plotted on the vertical axis and wavenumber data is plotted in the horizontal axis" (col. 4, lines 25-27). A pointer, as described in the above disclosure, is equivalent to a "cursor", as recited by Claim 3. From the above disclosure, it is clear that the graph elements Barber's method plots are "data curves", as recited by Claim 3.

6. As to Claim 4, Barber anticipates a user-movable display region displayed on the display screen when the graph element is a derived data display. Barber discloses that "The user, clicking the pointer within overlay window 20 and dragging the pointer in the horizontal and vertical direction within radar window 10, shifts the position of overlay window 20 within radar window 10. The shift in the overlay window 20 is reflected in detailed window 30 by the processor displaying different wavenumber data and absorbance data" (col. 5, lines 47-55). The user action of shifting the position of the overlay window as disclosed by Barber causes a change or movement in the region displayed. This constitutes a "user-movable display region", as recited in Claim 4.

Claim Rejections - 35 USC § 103

7. Claims 5-6, 8 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barber in view of Tittle (U.S. Patent 6,603,477).

8. As to Claim 5, Barber teaches a display screen connected to a computer for displaying a plurality of results of sample analysis. Barber discloses "a method of displaying a spectrum on a computer system having a display" (col. 2, lines 1-14). A spectrum consists of "results of sample analysis", as recited by Claim 5.

Barber also teaches means for permitting user selection of images for calculation. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col. 1, lines 60-67). Spectral subtraction is a type of calculation of derived data, as recited by Claim 5.

Barber further teaches means for displaying a derived data user interface on the display screen in response to user selection of one or more displayed images to enable user selection of a derived data calculation process. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col. 1, lines 60-67). The selection of spectrum via pointing device constitutes a "derived data user interface", as recited by Claim 5. Spectral subtraction is a type of calculation of "derived data", as further recited by Claim 5.

Barber does not teach means for determining whether display of data may be achieved without interfering with other images. Tittle, however, discloses a method of displaying data received from sensors such that "When the number of sensors of the

first group of sensors exceeds the number of traces that can be displayed on the first graph, a second axis of the second graph is associated with the unit of measure of the first group of sensors" (col. 2, lines 13-19). Since Tittle is executing a process when the number of traces on a graph exceeds the number allowed, it is implied that Tittle must include some sort of means for determining at what point the number of traces allowed on one graph is exceeded. Tittle also discloses that the reason this is done is because in prior art, "confusing combinations of trace selections may result in the display of one or more graphs having confusing combinations of magnitude and/or units of measure" (col. 1, lines 20-28). It would have been obvious to one skilled in the art to modify Barber's display and means for selection of images to determine interference in order to make the display less confusing as taught by Tittle.

Barber also does not teach means for displaying a user interface to enable a user to select a convenient display location for data if a determination is made that display of the data cannot be achieved without interfering with other displayed data. Tittle, however, discloses a method of displaying data received from sensors such that "When the number of sensors of the first group of sensors exceeds the number of traces that can be displayed on the first graph, a second axis of the second graph is associated with the unit of measure of the first group of sensors" (col. 2, lines 13-19). Tittle further discloses that "Process control device 2 is configured to receive, via a user input 14, operator or user commands. One such set of commands includes the selection of a set of sensors, e.g., S1-S8, in a user selected order. In response to selecting the set of sensors S1-S8, process control device 2 produces on first graph 6,

and/or second graph 8 a set of traces" (col, 4, lines 35-44). This method is further evidenced by Tittle in Figures 1-7. Tittle is using a user interface to choose display locations of graphs, as recited by Claim 5. It would have been obvious to one skilled in the art to modify Barber's display and means for selection of images to enable a user to choose the location of an interfering graph in order to make the display less confusing as taught by Tittle.

9. As to Claim 6, Barber anticipates a derived data display adjustment system in which the displayed images are data curves. Barber discloses "a method of displaying a spectrum on a computer system having a display" (col. 2, lines 1-14) and that "absorbance data is plotted on the vertical axis and wavenumber data is plotted in the horizontal axis" (col. 4, lines 25-27). From this disclosure, it is clear that the displayed spectrum is a "data curve", as recited by Claim 6.

10. As to Claim 8, Barber anticipates a derived data user interface that comprises one of more user-selectable derived data calculation processes. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col. 1, lines 60-67). Spectral subtraction is a type of calculation of derived data and the "pointing device" is part of a "user interface", as recited by Claim 8.

11. As to Claim 11, Barber teaches a process performed by a computer that includes means for permitting user selection of images for calculation. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for

display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col. 1, lines 60-67).

Barber further teaches a process performed by a computer that includes means for displaying a derived data user interface. Barber discloses that "The user is able, with a pointing device, to directly select a portion of the spectrum for display and to directly perform graphic manipulation of the spectrum, such as spectral subtraction" (col. 1, lines 60-67). The selection of spectrum via pointing device constitutes a "derived data user interface", as recited by Claim 11.

Barber also teaches that the means for permitting user selection and means for displaying a derived data interface are performed by a computer. Barber discloses "a method for graphically manipulating a sample spectrum on a computer system", which includes means for the aforementioned processes, as recited by Claim 11.

Barber does not teach a process performed by a computer that includes determining means. Tittle, however, discloses a method of displaying data received from sensors such that "When the number of sensors of the first group of sensors exceeds the number of traces that can be displayed on the first graph, a second axis of the second graph is associated with the unit of measure of the first group of sensors" (col. 2, lines 13-19). Tittle further discloses that "a process control device 2, such as a programmable logic controller or a computer, is connected to receive signals from sensors"(col. 4, lines 14-22). Tittle further discloses that "With reference to FIG. 2b, and with continuing reference to FIGS. 1 and 2a, after receipt of the sensor numbers and the associated units of measure shown in FIG. 2a, process control device 2 arranges the

sensors into groups 14, 16 and 18" (col. 5, lines 1-8). From the above disclosures it is clear that Tittle is using the process control device, which is disclosed as a computer, as determining means to decide where graphs should be placed. It would have been obvious to one skilled in the art to modify Barber's display and means for selection of images to include determining means using a computer in order to make the display less confusing as taught by Tittle.

Barber also does not teach a process performed by a computer that includes means for displaying a derived data adjustment user interface. Tittle, however, discloses a method of displaying data received from sensors such that "When the number of sensors of the first group of sensors exceeds the number of traces that can be displayed on the first graph, a second axis of the second graph is associated with the unit of measure of the first group of sensors" (col. 2, lines 13-19). Tittle further discloses that "Process control device 2 is configured to receive, via a user input 14, operator or user commands. One such set of commands includes the selection of a set of sensors, e.g., S1-S8, in a user selected order. In response to selecting the set of sensors S1-S8, process control device 2 produces on first graph 6, and/or second graph 8 a set of traces" (col, 4, lines 35-44). This method is further evidenced by Tittle in Figures 1-7. Tittle further discloses that "a process control device 2, such as a programmable logic controller or a computer, is connected to receive signals from sensors" (col. 4, lines 14-22). From the above disclosures, it is clear that Tittle is using a user interface, connected to the process control device, which is disclosed as a computer, to choose display locations of graphs, which comprises a derived data user interface. It would

have been obvious to one skilled in the art to modify Barber's display and means for selection of images to enable a user to choose the location of an interfering graph using a computer in order to make the display less confusing as taught by Tittle.

12. As to Claim 12, Barber anticipates a cursor displayed on a display screen when the graph element comprises a data curve. Barber discloses that "the user employs a graphical input device such as a mouse to manipulate overlay window 20 using well known methods such as pointing, clicking, and dragging a pointer on the display" (col. 5, lines 39-45). Barber also discloses that "absorbance data is plotted on the vertical axis and wavenumber data is plotted in the horizontal axis" (col. 4, lines 25-27). A pointer, as described in the above disclosure, is equivalent to a "cursor", as recited by Claim 12. From the above disclosure, it is clear that the graph elements Barber's method plots are "data curves", as recited by Claim 12.

13. As to Claim 13, Barber anticipates a user-movable display region displayed on the display screen when the graph element is a derived data display. Barber discloses that "The user, clicking the pointer within overlay window 20 and dragging the pointer in the horizontal and vertical direction within radar window 10, shifts the position of overlay window 20 within radar window 10. The shift in the overlay window 20 is reflected in detailed window 30 by the processor displaying different wavenumber data and absorbance data" (col. 5, lines 47-55). The user action of shifting the position of the overlay window as disclosed by Barber causes a change or movement in the region displayed. This constitutes a "user-movable display region", as recited in Claim 13.

14. Claims 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barber in view of Tittle and further in view of Fawcett (U.S. Patent 4,821,303).

15. As to Claim 7, Barber, in view of Tittle, teaches a derived data display adjustment system according to Claim 5. Neither Barber nor Tittle teaches DSC curves as display images. Fawcett, however, discloses that "The recorders 106 and 114 (FIG. 9) may be connected together at a terminal and plotted at 115 (FIG. 11) to produce a chart in which the variations in differential power are shown as a function of temperature. Such a DSC curve (as in FIG. 12a) constitutes the ultimate data output of the calorimeter portion of the instrument of the invention... Detailed insight into both structural and thermodynamic properties of the sample is thus possible " (col. 8, lines 36-47). It would have been obvious to modify Barber in view of Tittle, and in further view of Fawcett, to display DSC curves in order to get detailed insight into structural and thermodynamic properties of a sample as taught by Fawcett.

16. As to Claim 9, Barber, in view of Tittle, teaches a derived data display adjustment system according to Claim 5. Neither Barber nor Tittle teaches interpolated melting start temperature as a user-selectable data calculation process. Fawcett, however, discloses that "In a single experiment, thermally induced structural changes, molecular orientation, crystallinity, stress, and strain as a function of temperature can all be studied (col. 11, lines 50-68). Melting start temperature is a function of temperature associated with structural change, and therefore can be studied by Fawcett's method and apparatus.

17. As to Claim 10, Barber, in view of Tittle, teaches a derived data display adjustment system according to Claim 5. Neither Barber nor Tittle teaches interpolated melting start temperature, interpolated crystallization start temperature, melting peak temperature, liquid crystal temperature, or glass transfer temperature as a user-selectable data calculation process. Fawcett, however, discloses that "In a single experiment, thermally induced structural changes, molecular orientation, crystallinity, stress, and strain as a function of temperature can all be studied (col. 11, lines 50-68). Melting start temperature, crystallization start temperature, melting peak temperature, liquid crystal temperature, and glass transfer temperature are all functions of temperature associated with structural change, and therefore can be studied by Fawcett's method and apparatus.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to derived data display and manipulation in general:

U.S. Patent 6,054,984 to Alexander

U.S. Patent 5,557,716 to Oka

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M Richer whose telephone number is (703) 305-5825. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

AMR
9/29/03